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PATENT  
Attorney Docket No. 041501-5423

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:	)	
	)	
Woo Hyuk CHOI	)	Confirmation No.: 1083
	)	
Application No.: 09/843,781	)	Group Art Unit: 2871
	)	
Filed: April 30, 2001	)	Examiner: Z. Qi
	)	
For: REPAIR STRUCTURE FOR LIQUID	)	<b>Mail Stop Appeal Brief-Patents</b>
CRYSTAL DISPLAY AND METHOD	)	
OF REPAIRING THE SAME	)	

Commissioner for Patents  
U.S. Patent and Trademark Office  
**Mail Stop Appeal Brief-Patents**  
Alexandria, VA 22315

**APPELLANT'S REPLY BRIEF TRANSMITTAL FORM**

1. Transmitted herewith is the Appellant's Reply Brief Under 37 C.F.R. § 1.193, which is being submitted in response to the Examiner's Answer dated July 7, 2006.

2. Additional papers enclosed.

- ☐ Drawings: [ ] Formal [ ] Informal (Corrections)
- ☐ Information Disclosure Statement
- ☐ Form PTO-1449, \_\_\_ references included
- ☐ Citations
- ☐ Declaration of Biological Deposit
- ☐ Submission of "Sequence Listing", computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequence.

## 3. Oral Hearing Under 37 C.F.R., 1.194

- ☐ Oral-hearing is hereby requested.  
☐ Fee under 37 C.F.R., 1.17(d) is enclosed.

## 4. Extension of time

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

- ☐ Appellant petitions for an extension of time, the fees for which are set out in 37 CFR 1.17(a)-(d), for the total number of months checked below:

<u>Total months requested</u>	<u>Fee for extension</u>	<u>[fee for Small Entity]</u>
<input type="checkbox"/> one month	\$ 120.00	\$ 60.00
<input type="checkbox"/> two months	\$ 450.00	\$ 225.00
<input type="checkbox"/> three months	\$ 1,020.00	\$ 510.00
<input type="checkbox"/> four months	\$1,590.00	\$ 795.00
<input type="checkbox"/> five months	\$2,160.00	\$1,080.00

Extension of time fee due with this request: \$ 0.00.

If an additional extension of time is required, please consider this a Petition therefor.

## 5. Fee Payment

- ☒ No fee is to be paid at this time.
- ☐ The Commissioner is hereby authorized to charge \$\_\_\_\_\_ for the Reply Brief filing fee due to Deposit Account No. 50-0310.

☒ The Commissioner is hereby authorized to charge any fees including fees due under 37 CFR 1.16 and 1.17 which may be required, or credit any overpayment to Deposit Account No. 50-0310.

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS

By: \_\_\_\_\_



David B. Hardy  
Reg. No. 47,362

Date: September 5, 2006

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PATENT  
ATTORNEY DOCKET NO.: 041501-5423

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

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**APPELLANT'S REPLY BRIEF UNDER 37 C.F.R. § 1.193(b)(1)**

Appellant filed a Notice of Appeal in the above-identified patent application on December 20, 2004. Appellant filed an Appeal Brief on February 16, 2005. The Board issued an Order Returning Undocketed Appeal to Examiner mailed November 14, 2005. A second Examiner's Answer was mailed July 7, 2006 (over 7 months after the Order was issued). This Reply Brief responds to the arguments raised in the Examiner's Answer mailed July 7, 2006. This Reply Brief is timely filed within the period for response which extends through September 7, 2006.

**Summary of Examiner's Answer**

Based upon Appellant's arguments presented in the Appeal Brief filed on February 16, 2005, claims 1, 3-8, 17-19, 21-24, and 26 are now allowed. Accordingly, claims 9, 12, 15, and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Salisbury (US 5,303,074) in view of Henley (US 5,459,410).

**Appellant's Reply Arguments**

In the Examiner's Answer, the Examiner admits that "Salisbury does not explicitly disclose that the repair patterns bypasses to pixel electrodes adjacent to the data line." Thus, the Examiner relies upon Henley to reason that "[b]ecause the gate line (scan line) and the data line form the pixel region, as shown in Figs. 6 and 14, [sic] the repair pattern is a conductive bridge across the pixel region as shown in Fig. 12c." In addition, the Examiner alleges that "[t]he figures 6 and 14 show an electrical diagram that does not show the precise distance, and the figures show that the principle of the pixel [regions] are defined by the data line and the gate line." Furthermore, the Examiner concludes that "[t]herefore, when forming the conductive bridge, the repair pattern of the conductive bridge, inherently, [bypasses] to pixel electrodes adjacent to the data line." Appellant respectfully disagrees.

As admitted by the Examiner, "[t]he figures 6 and 14 show an electrical diagram that does not show the precise distance." However, FIGs. 6 and 14 are just that, electrical schematic diagrams that, by definition, are not meant to show exact relative positioning of individual components of the electric circuitry shown in FIGs. 6 and 14. Accordingly, Appellant respectfully asserts that no inference may be made as to placement of the conductive bridge 88, as shown in FIGs. 12a-12c, with regard to the electrical schematic diagrams of FIGs. 6 and 14.

Moreover, Appellant respectfully asserts that the Examiner's allegation that "the repair pattern of the conductive bridge, inherently, [bypasses] to pixel electrodes adjacent to the data line" is simple not true and definitely neither taught nor suggested by Henley or Salisbury, whether taken singly or combined.

With regard to the Examiner's dissertation on use of the term "bypass," Appellant respectfully asserts that the explanation is inapposite to either Henley or Salisbury, and fails to remedy the deficiencies of Salisbury, as admitted by the Examiner, or remedy the deficiencies of Henley, as presented above. Furthermore, Appellant respectfully asserts that the conclusion reached by the Examiner, i.e., "the repair pattern is a current shunt, and the repair pattern disclosed in Salisbury and Henley adjacent to the pixel electrodes and the data line, so that the repair pattern disclosed in Salisbury and Henley is bypassed to the pixel electrodes adjacent to the data line" is unsupported by any of Salisbury, Henley, or Merriam-Webster's Collegiate Dictionary, whether taken singly or combined.

The Examiner's Answer continues to allege that "Henley indicates (col. 2, lines 15-18) such repair structure [improves] the production yields, especially, for assembling high density active matrix LCD panels." Although Appellant does not dispute that Henley teaches inspection and repair of AM-LCD panels at col. 2, lines 15-18, Appellant does assert that Henley simply does not provide any teaching or suggestion, either implicitly or explicitly, that the conductive bridge structure 88, in FIGs. 12a-12c, overlaps or bypasses to the schematic representations of pixel electrodes shown in FIGs. 6 and 14 of Henley. More generally, Appellant respectfully asserts that Henley fails to teach, suggest, or imply that the conductive bridge structure overlaps or bypasses to any of the schematic representations of pixel electrodes disclosed by Henley.

The Examiner's Answer concludes that "it would have been obvious to those skilled in the art at the time the invention was made to arrange a repair pattern as claimed in claim 9 for improving the production yields of the high density active matrix LCD display." However, for at least the reasons set forth above, Appellant respectfully asserts that the Examiner fails to establish a *prima facie* case of obviousness with regard to independent claim 9, and hence dependent claims 12, 15, and 16. Specifically, Appellant respectfully asserts that the Examiner has failed to provide any proper motivation with which to modify Salisbury to arrive at the invention of independent claim 9, or any logical reasoning, based upon Henley, to modify Salisbury to arrive at Appellant's claimed invention.

In addition, the Examiner now includes further rebuttal to Appellant's arguments set forth in the Reply Brief filed on June 17, 2005. Specifically, the Examiner is now attempting to equate a pixel *region* with a pixel *electrode*. At page 7, section (1) of the Examiner's Answer, the Examiner alleges that "[t]he figures show a repair structure in which the conductive bridge (88) bypasses the pixel electrode adjacent the data line, because the gate line and the [data] line defining the pixel region, and the conductive bridge (88) crosses over the pixel region including pixel electrode that would bypass the pixel electrode and adjacent scan line." Appellant respectfully disagrees.

Appellant respectfully asserts that FIG. 12C of Henley fails to show any structural equivalent to a pixel *electrode*. In addition, although the crossing of gate and data lines may establish a partial boundary of a pixel *region*, it does not necessarily follow that the pixel *electrode* is wholly contained within the pixel *region*. In other words, use of the terms pixel *electrode* and pixel *region* are not synonymous since pixel *region* refers to a generalized area

lacking completely defined boundaries, whereas the term pixel electrode refers to an actual element having distinct boundaries. Thus, Appellant respectfully asserts that the Examiner's equating of a pixel *region* with a pixel *electrode* is repugnant to what a pixel *electrode* actually is. Therefore, Appellant respectfully asserts that the response provided by the Examiner at page 7, section (1) of the Examiner's Answer fails to successfully rebut Appellant's argument that Henley remedies the admitted deficiencies of Salisbury.

With regard to the response provided by the Examiner at page 7, section (2) of the Examiner's Answer, Appellant respectfully asserts that the explanation is inapposite to either Henley or Salisbury, and fails to remedy the deficiencies of Salisbury, as admitted by the Examiner, or remedy the deficiencies of Henley, as presented above.

With regard to the response provided by the Examiner at page 7, section (3) of the Examiner's Answer, Appellant respectfully asserts that Henley simply does not provide any teaching or suggestion, either implicitly or explicitly, that the conductive bridge structure 88, in FIGs. 12a-12c, overlaps or bypasses to the schematic representations of pixel electrodes shown in FIGs. 6 and 14 of Henley. More generally, Appellant respectfully asserts that Henley fails to teach, suggest, or imply that the conductive bridge structure overlaps or bypasses to any of the schematic representations of pixel electrodes disclosed by Henley.

Accordingly, with regard to the conclusion set forth by the Examiner at page 8 of the Examiner's Answer, Appellant respectfully asserts that the combined teachings of Salisbury and Henley fail to teach or suggest the combination of features recited by at least independent claim 9, and hence dependent claims 12, 15, and 16. Specifically, since Henley fails to remedy the



admitted deficiencies of Salisbury, as detailed above, then the Final Office Action fails to establish a *prima facie* case of obviousness with regard to at least independent claim 9.

Thus, at least for the reasons discussed above and those set forth in the Appeal Brief, Appellant respectfully submits that the rejection of claims 9, 12, 15, and 16 under 35 U.S.C. § 103(a) is improper and should be withdrawn.


### **CONCLUSION**

In view of the foregoing, Appellant respectfully requests the reversal of the Examiner's rejections and allowance of all the pending claims. If there are any other fees due in connection with the filing of this Reply Brief, please charge the fees to our Deposit Account No. 50-0310.

Respectfully submitted,

**MORGAN LEWIS & BOCKIUS LLP**

By: \_\_\_\_\_

  
David B. Hardy  
Reg. No. 47,362

Dated: September 5, 2006

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